

New Mycetophilidae from North Carolina (Diptera).

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Dr. B. B. Fulton¹ of the North Carolina State College has reared three new species of Mycetophilidae, the first from web-spinning larvae, the second from luminous larvae, the third from pupae found in rotten wood. Since he hopes to publish a detailed account of the life histories it seems well to publish descriptions of the adults at this time.

I wish to thank Dr. O. A. Johannson for the loan of his Pennsylvania "*Ceroptatus bellulus*", Dr. F. W. Edwards for information about Williston's type and Mr. B. B. Fulton for the privilege of retaining the types of the new species.

Ceroptatus (Cerotelion) johannseni new species.

This species is conspecific with Johannsen's Pennsylvania specimen of *Ceroptatus bellulus*² nec Williston³. Williston's type from Mexico belongs to the subgenus *Euceroptatus*⁴.

These specimens belong to the subgenus *Cerotelion*; the tibial setulae are irregularly arranged, the face is broad, the spurs are black, the eyes are emarginate and the ocelli are removed from the eye margins by about the width of an ocellus.

The specimens of this species are quite variable in color and in size, as seems to be true of other species of this genus. The North Carolina males are predominately brown and yellow, the females black (Fulton reared them together). A Connecticut male and female (in copula) are both predominately brown and yellow. Another Connecticut male and an Iowa male differ in having black abdomens approaching the North Carolina females in color. Structurally they are alike as far as I am able to find. The male terminalia are all alike and resemble somewhat *Ceroptatus (Cerotelion) lineatus* Fabricius. The wings have no brown marks. The North Carolina females of this

¹ J. Elisha Mitchell Society 55: 289-293, pl. 27. 1939.

² Maine Agr. Exp. Sta. Bull. 172: 240. 1909.

³ Biol. Centr. Amer. Dipt. 1: 219. 1900. Maine Agr. Exp. Sta. Bull. 172: 239. 1909.

⁴ Proc. Linn. Soc. N. S. Wales 54 (3): 174. 1929.

species apparently resemble *Ceroplatus (Ceroplatus) carbonarius* Bosc in coloration, but lack the prominent wing spots, lack the white at the tips of the antennae, possess stripes on the mesonotal disk, and R_4 ends in C not R_1 .

♂ : Total length 7 mm.; wing 4 mm. Head black above, face and mouthparts yellow. Thorax yellow; mesonotum with a median triangular brown stripe which is divided by a median yellow line anteriorly, the apex of the triangle is directed posteriorly where it becomes obsolete before the scutellum. Lateral mesonotal stripes darker, not reaching the anterior margin and leaving the humeral angles yellow, widened posteriorly above the wing bases so that a yellow V-shaped line is left between the lateral and median stripes. Scutellum yellow. Pleura yellow, pleurotergites, postnotum and hypopleurites brownish. Halteres with the knob black and the stalk yellow. Legs yellow, the bases of the middle and hind femora slightly brownish. Abdomen brown with the bases of the segments broadly yellow. Posterior portion of the pronotum and the propleura with setae. Anterior spiracular membrane without setae. Dorso-anterior angle of the anepisternite with fine setae. Postnotum bare.

Wings hyaline. C extends one-third the distance between the tips of R_s and M_{1+2} ; Sc ends in C at the level of the end of the basal cell; Sc_2 absent; R_4 ends in C; R_4 short and only slightly oblique; R_4 origin at the level of the tip of R_1 ; stalk of M one and a half to twice as long as the coalesced portion of M with R_s ; anal vein reaches the wing margin.

A male specimen from Iowa differs in being smaller and darker in color. Total length 5mm. Mesonotum brownish yellow with black stripes. Pleura dark brown. Scutellum and postnotum black; setae black. Stalk of halteres whitish, knob black. Legs whitish yellow; tips of the middle and hind coxae blackish and the bases of the middle and hind femora blackish. Abdomen black; setae black.

A Connecticut male also has a black abdomen, another has the abdomen brown with the bases of the third, fourth and fifth segments yellow.

♀ : Total length 5.75 to 9 mm. Head black above, face and palpi yellow. Antennae black. Thorax mainly black; mesonotum yellow with lateral black stripes abbreviated anteriorly and a median black triangle with its apex directed posteriorly but not reaching the scutellum. Scutellum black. Pleura and postnotum black. Abdomen black.

The Connecticut female differs in having a brown thorax and abdomen.

Holotype:—♂; Raleigh, Wake County, NORTH CAROLINA. Reared from larva by B. B. Fulton; adult emerged April 25. [Acad. Nat. Sci. Phila. No. 6488].

Allotype:—♀; ten miles north of Southport, Brunswick County, NORTH CAROLINA. Reared from larva by B. B. Fulton; adult emerged April 11.

Paratypes:—1 ♀; ten miles north of Southport, Brunswick County, NORTH CAROLINA; reared April 24 (B. B. Fulton). 2 ♀; Raleigh, Wake Co., North Carolina; reared April 25 (B. B. Fulton). 1 ♂; Black Mts., Buncombe and Yancy Counties, North Carolina (W. G. Deitz). 1 ♂; Pottstown Montgomery County, PENNSYLVANIA (C. W. Johnson) [Johannsen Collection]. 2 ♂; 1 ♀; Redding, Fairfield County, CONNECTICUT, June 10-26 (A. L. Melander). 1 ♂; Muscatine County, IOWA, August 28. (B. Berger).

Platyura (Rutylapa) fultoni new species.

This species runs to *Platyura genualis* Joh. in Johannsen's key⁵ but differs in terminalial structure. I place this species in the subgenus *Rutylapa*, although it lacks the posterior spiracular hairs, because it agrees in the other characters of the subgenus.

♂:—Total length 5 mm. Head brown, deep black about the three ocelli, face yellow; palpi dark brown, the remainder of the mouthparts yellow. Thorax light yellow; mesonotum brownish yellow with two narrow stripes arising at the ends of the rudimentary transverse suture, uniting behind and obsolete before reaching the scutellum; lateral stripes broad, obsolete anteriorly leaving the humeral angles yellow. Mesonotum uniformly setose. Scutellum with its margin broadly black. Pleura with two prominent brown spots, one on the anepisternite, the other on the pleurotergite. Anepisternite with minute setae above. No spiracular setae. Postnotum yellow; its dorsal surface brown and setose.

Wings with a central spot and the tips dusky. C extends half way to M₁₊₂, Sc ends in C over the origin of Rs, base of Rs faint, R₁ arises under the tip of Rs, Rs and M fused for approximately one-half the length of the stalk of M.

⁵ Maine Agr. Exp. Sta. Bull. 172: 250, 1909.

Tibial spurs 1-2-2. Abdominal tergite one brown, second, third, and fourth with the basal half to two-thirds yellow and the distal portion brown, the remainder of the abdomen black. The male terminalia with simple styles unevenly bifurcate at their tips. Legs yellow; trochanters with black spots below on the meso- and metathoracic legs and brown on the prothoracic legs. Meso- and metafemora dusky above.

♀:—Differs from the male in having R_4 slightly shorter, in having the central wing spot reaching into the fork of M. Abdomen a dusky yellow with narrower greyish posterior margins.

Holotype:—♂; Glenville, Jackson County, NORTH CAROLINA; June 10. (B. B. Fulton). [Acad. Nat. Sci. Phila. No. 6489].

Allotype:—♀; Glenville, Jackson County, NORTH CAROLINA; June 13. (B. B. Fulton).

Paratypes:—6♂; Glenville, Jackson County, North Carolina; June 10-14 (B. B. Fulton). 3♀; same locality, June 16-19 (B. B. Fulton). 2♂; Lewis Falls, Shenandoah National Park, VIRGINIA, July 4 (A. L. Melander).

***Phthinia carolina* new species.**

This species is close to *Phthinia catawbiensis* Shaw and *Phthinia tanypus* Loew. It differs in having vein C hardly extended beyond the tip of Rs, in having the Cu fork almost under the M fork.

♂: Total length 7 mm.; wing 4.5 mm.; fore tibia 1.70 mm., fore basitarsus 3.80 mm. Head black; face and mouthparts brown. Antennae deep brown except the scape and the base of the flagellum which are yellow. Thorax brown; mesonotum with black vittae.

Wings hyaline, the apex with macrotrichia on the membrane. C hardly extended beyond the tip of Rs; Sc ends in C before the level of the origin of Rs; Sc_2 just before the middle of Sc; stalk of M subequal to r-m; Cu fork practically under the M fork; Cu_2 sinuate. Halteres yellow, knob brownish black.

Legs yellow. Tibial spurs 1-2-2. Abdomen black, bases of segments especially ventrally brown. Each style of male terminalia with two unequal spines as in *Phthinia catawbiensis* Shaw but with the mesally directed slightly sclerotized lobe more compact, broader and almost triangular.

♀ :—Similar to the male. Fore tibia 1.80 mm., fore basitarsus 3.40 mm.

Holotype:—♂ ; Raleigh, Wake County, NORTH CAROLINA; April 4. (B. B. Fulton). [Acad. Nat. Sci. Phila. No. 6490].

Allotype:—♀ ; Raleigh, Wake County, NORTH CAROLINA; April 6. (B. B. Fulton).

Some Neotropical Syrphid Flies (Diptera).

By FRANK M. HULL, University of Mississippi.

This paper presents descriptions of some species of neotropical Syrphids that have been received from several sources. The author is indebted to Mr. J. Lane of Sao Paulo, Brazil, for the privilege of studying many interesting South American species, two of which are described here. Unless otherwise stated, types are in the author's collection.

Microdon hondurania n. sp.

♂. Length 5.5 mm.; antennae 1.5 mm. Head: eyes not approximated above, without pile and the front barely narrower than the parallel-sided face, both of which are broad. Front and upper part of occiput, except the posterior margin along the dorsum, shining dark brown. Face and cheeks pale shining yellow and a pair of similarly colored rectangular spots placed transversely across the middle of the front, barely separated in the middle. Pile of the face and lower part of occiput and the extreme posterior margin of the upper part of the occiput pale yellow. Antennae black, the third joint a little more than twice as long as the first joint.

Thorax: widely dark shining brown over the mesonotum, except narrowly along the sides and for a short distance upon the anterior margin inside of the humeri. The broad, dark central area with faint narrow violaceous vittae. Pleurae and the lateral margin of the mesonotum, the humeri and the scutellum light yellowish brown, the disc of the scutellum slightly darker, its extremely blunt, closely approximated nodulate spines blackish.

Abdomen: short and broad, the whole of the first segment and whole of the second, except for an obscure lateral brown spot, light brownish yellow. The third segment extensively dark brown, its posterior margin narrowly light yellow, extending broadly forward in the middle but not bisecting the anterior